

APPENDIX D



WHERE BUSINESS AND THE ENVIRONMENT CONVERGE

588 Silver Street, Agawam, MA 01001 tel 413.789.3530 fax 413.789.2776 www.ecsconsult.com

Mr. James Morrissey
Senior Architect
Facilities and Campus Planning Division
University of Massachusetts – Amherst
360 Campus Center Way
Amherst, MA 01003

August 14, 2009
Project No. 01-207783.00
Document No. 38075

RE: Limited Asbestos and Lead Paint Inspection
Waltham Research Station
Main Barn, Calf Barn and Garage
University of Massachusetts

Dear Jim:

As per your request, Environmental Compliance Services, Inc. (ECS) has completed a limited inspection of building materials for the presence of asbestos-containing materials (ACMs) and lead containing paint (LCP). Materials inspected were from the proposed renovation areas as defined in WR # 06-000809.

On July 7, 2009 ECS personnel collected a total of 4 bulk samples of various suspect roofing materials for asbestos determination. These materials were deemed homogenous with other building materials located in the areas of the proposed renovations.

Laboratory test results DID INDICATE THE PRESENCE OF ASBESTOS.

The inspection sample locations and findings are detailed on the tables below. The sampling inspection forms and laboratory data sheets are enclosed with this letter.

**SUSPECT MATERIALS WITH ASBESTOS DETECTED
WALTHAM RESEARCH STATION
MAIN BARN, CALF BARN AND GARAGE
UNIVERSITY OF MASSACHUSETTS**

Functional Space (s)	Material Description	Sample Number
Waltham Research Station; Calf Barn	Square transite roof shingles	WA-3

**SUSPECT MATERIALS WITH NO ASBESTOS DETECTED
 WALTHAM RESEARCH STATION
 MAIN BARN, CALF BARN AND GARAGE
 UNIVERSITY OF MASSACHUSETTS**

Functional Space (s)	Material Description	Sample Number
Waltham Research Station; Garage	Roofing Material (shingles and paper barrier), from the area of large hole in the roof	WA-1
Waltham Research Station; Main Barn	Roofing Material (shingles and paper barrier), collected from the ground underneath the large hole in the roof	WA-2
Waltham Research Station; Calf Barn	Black roofing barrier found on the ground under large collapsed roof area	WA-4

On July 7, 2009 ECS personnel collected a total of 10 bulk sample of paint for total lead determination. These materials were also deemed homogenous with other building materials located in the area of the proposed renovation. Exact sample locations are detailed on the table below and the sampling inspection forms. The laboratory data sheets are enclosed with this letter. Laboratory test results DID INDICATE THE PRESENCE OF LEAD above method detection limits. All samples were submitted to ProScience Analytical Services an accredited laboratory for asbestos and lead determination.

**LEAD ANALYSIS RESULTS
 WALTHAM RESEARCH STATION
 MAIN BARN, CALF BARN AND GARAGE
 UNIVERSITY OF MASSACHUSETTS**

Building	Description	Sample ID	Substrate and location	Result (% weight)
Waltham Research Station; Garage	White Paint	W-1	Wood trim around doors and windows	6.84
Waltham Research Station; Main Barn	White/Tan Paint	W-2	Large wood door frame	25.79
Waltham Research Station; Main Barn	Green Paint	W-3	Front entrance sliding door	10.24
Waltham Research Station; Main Barn	White Paint	W-9	Wood trim around basement side door frames	36.24
Waltham Research Station; Main Barn	Brown Paint	W-10	Exterior wood siding shingles	0.07
Waltham Research Station; Calf Barn	Green Paint	W-4	Wood window and door frame trim	23.93
Waltham Research Station; Calf Barn	White Paint	W-5	Interior wood window frame trim	0.22
Waltham Research Station; Calf Barn	Orange Paint	W-6	Entrance door	0.02
Waltham Research Station; Calf Barn	Brown Paint	W-7	Interior wood window frame trim	0.57
Waltham Research Station; Calf Barn	White Paint	W-8	Exterior building walls	32.15

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University of Massachusetts - Amherst
August 14, 2009

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If you have any questions pertaining to this matter, please do not hesitate to contact our office.

Sincerely,
ENVIRONMENTAL COMPLIANCE SERVICES, INC.

Handwritten signature of Michael Grover in cursive, followed by the initials (EAB) in a circle.

Michael Grover
Compliance Technician
Asbestos Inspector #AI000201

Handwritten signature of Christopher L. Godfrey in cursive, followed by the initials (EAB) in a circle.

Christopher L. Godfrey
Senior Project Manager

MG/CLG/kab
Attachments

ProScience Analytical Services, Inc.

PLM Asbestos Chain of Custody Record

LABORATORY/HEADQUARTERS LABORATORY SERVICES
 22 Cummings Park, Woburn, MA 01801 683 North Mountain Rd., Newington, CT 06111
 T:781-935-3212 F:781-932-4857 T:860-953-1022 F:860-953-1030

Client: Environmental Compliance Services, ECS
 Address: 588 Silver Street, Agawam, MA. 01001
 Phone / FAX Number: 413-789-3530 / 413-789-2776
 Project Site/Project Job Number: 01-212473.00 / U-Mass Amherst/ Waltham
 Contact: Chris Godfrey / Mike Grover Work Request # 06-809



☐ RUSH

Page 1 of 1

Turn Around Time Requested

☒ Same day ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 4-5 Days

Relinquished by/date: Michael Grover 8/2/09
 Received by/date: Kathy Artore 8/10/09
 Samples received: 4 Analyzed 9:35 AM
 Faxed, E-mailed, Verbal by/date: US 8/10/09
 Stop on first positive: Yes No

For Lab Use		Batch #	Analyzed by/date		Asbestos Percentage (%)		Non Asbestos Percentage (%)	
Lab ID	Field ID Sampled date	Description / Location	Visual	Optical Properties	RI	Asbestos Percentage (%)	Non Asbestos Percentage (%)	
	WA-1	FUMastic Lm Cm Cvm Pls/Pib Sh/Jc Pl Ct Ck Giz Gdb Description: Roofing Material -> Shingles, Paper Floor: Rm/Location: GALLERIES	Color: B L H G N Texture: R H N Homogeneity: B L H G N Fritable: B L H G N	Extinction: W L L H L G N Microphology: W L L H L G N Sign of Elongation: W L L H L G N Birefringence: W L L H L G N Pleochroism: W L L H L G N	II	Chrysotile: 100% Amosite: 0% Crocidolite: 0% Tremolite: 0% Anthophyllite: 0% Actinolite: 0%	Fiberglass: 0% Mineral Wool: 0% Cellulose: 0% Hair: 0% Synthetic: 0% Other: 0% Non Fibrous: 0%	50
	WA-2	FUMastic Lm Cm Cvm Pls/Pib Sh/Jc Pl Ct Ck Giz Gdb Description: Roofing Material -> Shingles & Paper Floor: Below Hole in Roof	Color: B L H G N Texture: R H N Homogeneity: B L H G N Fritable: B L H G N	Extinction: W L L H L G N Microphology: W L L H L G N Sign of Elongation: W L L H L G N Birefringence: W L L H L G N Pleochroism: W L L H L G N		Chrysotile: 100% Amosite: 0% Crocidolite: 0% Tremolite: 0% Anthophyllite: 0% Actinolite: 0%	Fiberglass: 0% Mineral Wool: 0% Cellulose: 0% Hair: 0% Synthetic: 0% Other: 0% Non Fibrous: 0%	50
	WA-3	FUMastic Lm Cm Cvm Pls/Pib Sh/Jc Pl Ct Ck Giz Gdb Description: Fiber Square Roof Shingles Floor: Rm/Location: MAIN HALL	Color: B L H G N Texture: R H N Homogeneity: B L H G N Fritable: B L H G N	Extinction: W L L H L G N Microphology: W L L H L G N Sign of Elongation: W L L H L G N Birefringence: W L L H L G N Pleochroism: W L L H L G N		Chrysotile: 100% Amosite: 0% Crocidolite: 0% Tremolite: 0% Anthophyllite: 0% Actinolite: 0%	Fiberglass: 0% Mineral Wool: 0% Cellulose: 0% Hair: 0% Synthetic: 0% Other: 0% Non Fibrous: 0%	87
	WA-4	FUMastic Lm Cm Cvm Pls/Pib Sh/Jc Pl Ct Ck Giz Gdb Description: Black Roofing Barrier Found on Floor Under - open Section of Roof Floor: Rm/Location: GALL - BARR	Color: B L H G N Texture: R H N Homogeneity: B L H G N Fritable: B L H G N	Extinction: W L L H L G N Microphology: W L L H L G N Sign of Elongation: W L L H L G N Birefringence: W L L H L G N Pleochroism: W L L H L G N		Chrysotile: 100% Amosite: 0% Crocidolite: 0% Tremolite: 0% Anthophyllite: 0% Actinolite: 0%	Fiberglass: 0% Mineral Wool: 0% Cellulose: 0% Hair: 0% Synthetic: 0% Other: 0% Non Fibrous: 0%	60
		FUMastic Lm Cm Cvm Pls/Pib Sh/Jc Pl Ct Ck Giz Gdb Description:						
		FUMastic Lm Cm Cvm Pls/Pib Sh/Jc Pl Ct Ck Giz Gdb Description:						

Sample Description Key: FUMastic=Floor tile and Mastic, Lm=Linoeum, Cm=Carpet mastic, Cvm=Covemolding mastic, Pls=Plaster skim, Plb=Plaster base,

Sh=Sheetrock, Je=Joint Compound, Pl=Pipe insulation, Ct=Ceiling tile, Ck=Caulking, Giz=Glazing, Gdb=Glue daub

Comments:



ProScience Analytical Services, Inc.
22 Cummings Park, Woburn, MA 01801

Telephone: 781-935-3212
Facsimile: 781-932-4857
Email: chemistry@proscience.net

Laboratory Report

Contact: Chris Godfrey
Client: ECS, Incorporated
Address: 588 Silver Street
Agawam, MA 01001

Batch #: C 256837
Date received: 8/10/2009
Date analyzed: 8/10/2009
Date of report: 8/10/2009

Project # 01-207783
P.O.# n/a
Project Site: UMASS Watham
WR

Lead Analysis In Paint Using SW846-7420/3051

Results in weight percent on an "as received" wet weight basis
All results are accurate to no more than three significant figures.

Unless otherwise indicated, all the quality control criteria for the method above have been met.

Lab ID	Client ID	Sample date	Description	Result	Detection Limit	Comments
C 341029	W-1	8/7/09	White Paint On Wood Trim Around Doors & Windows, Garage	6.84	0.01	
C 341030	W-2	8/7/09	White/Tan- Large Door Frame Paint, Main Barn	25.79	0.01	
C 341031	W-3	8/7/09	Green-Entrance Door Paint, Main Barn	10.24	0.02	
C 341032	W-4	8/7/09	Green Window & Door Frame Paint, Calf Barn	23.93	0.02	
C 341033	W-5	8/7/09	White-Interior Window Frame Trim Paint, Calf Barn	0.22	0.01	
C 341034	W-6	8/7/09	Orange Entrance Door Paint, Calf Barn	0.02	0.01	
C 341035	W-7	8/7/09	Brown-Interior Window Frame Trim Paint, Calf Barn	0.57	0.01	
C 341036	W-8	8/7/09	White-Exterior Wall Paint, Calf Barn	32.15	0.01	
C 341037	W-9	8/7/09	White Trim Paint On Basement Door Fram Main Barn	36.24	0.01	
C 341038	W-10	8/7/09	Brown-Exterior Siding Shingles, Main Barn	0.07	0.01	

BDL - Below Detection Limit

Dan Pine, Chemistry Analyst
Stephen Chace, Chemistry Laboratory Manager
Adrian Stanca, Laboratory Director

ProScience Analytical Services, Inc.

Chemistry Chain of Custody Record/Metals

LABORATORY/HEADQUARTERS CONSULTING SERVICES

22 Cummings Park, Woburn, MA 01801
T: 781-935-3212 F: 781-932-4857

Client: Environmental Compliance Services

Address: Street 588 Silver Street

Town Agawam State/Zip MA/01001

Project Site Line 1 UMMS Amherst Project Number 01-307783

Line 2 WR more Waltham

Contact: Chris Godfrey/ Mike Grover Phone 413-789-3530

FAX 413-789-2776 AUPager

☐ Rush < 6 Hours

Turn Around Time Requested

☒ Same Day ☐ Next Day ☐ 48 Hours ☐ 72 Hours ☐ 4-5 Days

Element

TYPE OF ANALYSIS

(Column 4)

AIR	DUST	PAINT
AI	DU	PA
PM10	SOIL	TOX
PM	SO	TC
TSP	WATER	WIPES
TS	WA	WI

Pb

Cd

Cr

As

Se

Ag

Ba

Hg

For Laboratory Use

Other (please specify)

BATCH NUMBER

QC

0256837

FOR LABORATORY USE ONLY

Date Sampled	Field I.D.	Sample Description/Location	TYPE OF ANALYSIS	Air Sampling Information				Wiped area			ANALYSIS			Lab I.D.
				Start Time	End Time	Start Flowrate	End Flowrate	Volume (liters)	length (inch)	width (inch)	Area (sq in)	Weight (grams)	AA Reading	
8/7/09	W-1	White paint on wood. Trim around doors & windows → Garage	PA											341029
	W-2	White/Tan - Large Door Frame Paint → main Barn												30
	W-3	Green - Entrance Door Paint → main Barn												31
	W-4	Green window & door frame trim paint → calf Barn												32
	W-5	White - Interior window frame trim paint → calf Barn												33
	W-6	Orange entrance door paint → calf Barn												34
	W-7	Brown - Interior window frame trim paint → calf Barn												35
	W-8	White - Exterior wall paint → calf Barn												36
	W-9	White trim paint on basement door frames → main Barn												37
8/7/09	W-10	Brown exterior sliding shingles → main Barn	PA											38

Relinquished By:

Received By:

Comments:

Date:

Date:

5/7/09

8-1009

Time:

Time:

5:00

9:53 AM

Log-out:

Date

PG

OF

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Wipes provided by ProScience Analytical

ver 4.7

For complete information about our services and locations please visit us at www.proscience.net or call the numbers above.